UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,406	12/20/2001	Dirk Nehring		5065

7590 06/23/2004

DIRK NEHRING
VERSAILLER STR. 1
GIESSEN, HESSEN, 35394
GERMANY

EXAMINER	
SODERQUIST, ARLEN	

ART UNIT	PAPER NUMBER
1743	

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/022,406	NEHRING ET AL.	
	Examiner	Art Unit	
	Arlen Soderquist	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-19 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-19 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 20 December 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on October 10, 2001. It is noted, however, that applicant has not filed a certified copy of the 0124070.2 application as required by 35 U.S.C. 119(b).

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the clip for sealing the two double walled shells, the outside locking mechanism of claim 11, the eyelet of claim 14, the movable hinge of claim 17, the carrying strap of claim 18 and the thermometer of claim 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The disclosure is objected to because of the following informalities: on page 4 of the specification, the last two sentences refer to claim 1 and the claim in an improper manner. The claims are to rely on the disclosure in the specification and drawings for their support. Additionally the disclosure is not supposed to change after the application has been filed. Since the claims often change during the processing of an application, statements in the specification that rely on the claims as are found in these two sentences would cause the disclosure to be changed as the claims change. For that reason the reference to the claims is improper.

Appropriate correction is required.

4. Claims 2-3 and 12-14 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited. It is not clear what structure constitutes a clip (the sealing tie mentioned on page 6 of the specification but not shown in the figures or another structure?) or an eyelet.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4-7 and 9-10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Bruce (US 5,235,819). In the patent Bruce teaches an apparatus for storing and distributing materials. The apparatus maintains products at an intended temperature during transport and storage at an ambient temperature deviating from the intended temperature. The invention features a container that holds the products and whose walls render heat transfer difficult. The container includes a main container body with a bottom and a side section that together define one or more integrated compartments (a double walled structure) suitable for storing a solidifiable substance. The container includes a lid which also has an integrated compartment for storing a solidifiable substance. When the lid is positioned on the main container body there is provided a solidifiable substance confinement enclosing the material storage space in the container from all sides. By subjecting the container and the solidifiable substance in its wall compartments (4, 4') to cold, so as to solidify the substance, subsequently inserting the products into the container after it has been moved to a room having a temperature adapted to the products, and positioning the lid over the container main body, an uninterrupted layer of solidifiable substance is provided around the entire material storage space. Column 2, lines 22-38 teach that water is one possible medium that is especially suited for materials which are to be maintained at 0 °C. or material to be maintained at a predetermined temperature below 0 °C, an additive such as salt can be added to lower the freezing temperature of the freezable substance.

Moreover, in situations when it is desirable to maintain the temperature of the product above 0□C, such as for a live lobster or blossoming flower products, a solidifiable substance having a higher solidification temperature is utilized. For example, paraffin hydrocarbon compounds such as tetradecane, pentadecane and hexadecane with solidification temperatures of 5.8°, 9.7° and 18.0 °C, respectively, can be relied upon. Various hydrocarbon alcohol compounds are also possible. Column 5, lines 35-40 teach that if added protection is deemed desirable, sealing means such as an elastomeric seal placed between rim 36 and flange 62 or interengaging molded surfaces (e.g., saw tooth, labyrinth) can be provided in the contacting surfaces of flange 62 and upper edge 36. Column 6, lines 17-28 teach that a suitable material for the main body container and lid includes HO polyethylene or polypropylene (transparent materials) as it is durable for handling the rough treatment associated with freight carrying and is sufficiently adaptable to handle the explosive effect of some of the solidifiable substance usable in the compartments. Such material can easily be injection molded to form the components of the present invention. If the container of the present invention is to be strictly used with a solidifiable substance that does not expand upon solidification then a less flexible material such as aluminum sheet metal can be relied upon. Table 1 shows a variety of compositions for the solidifiable material including a saline solution and paraffins.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 2-3, 12-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruce as applied to claim 1 above, and further in view of Basso (US 4,517,815). Bruce does not teach multiple sections being combined to form the enclosed space.

In the patent Basso teaches an insulated modular cooler having a plurality of tubular housing sections and a plurality of tubular hollow-walled insert housings containing a refrigerant in the hollow walls of the insert housings. The tubular housing sections can be secured end to end to form an elongated tubular body into which the tubular insert housings are slidably received. The cooler further comprises a top end cap adapted to engage the top of the tubular cooler body as well as the top of each individual cooler housing sections, and a lower end cap adapted to engage the bottom of the tubular body as well as the bottom of each individual cooler housing section. See figures 1-3 teaching that the disadvantages associated with prior art devices when the size of the cooler is not close the size of the material being stored is overcome by providing an insulated modular cooler having a plurality of detachable housing sections, each section comprising a tubular member having hollow walls and containing a refrigerant in the hollow walls. The sections are attached end to end so as to provide one or more cooled compartments adapted to fully enclose the containers or other products therein. Moreover, as products contained in each section are consumed, the section can be detached from the remaining sections so as to reduce the bulk of the cooler as the contents are consumed. The cooler housing sections (12,14,16) each include an insert housing (22,24,26). The inner bores of the tubular insert housings communicate end to end so as to form a central cooling chamber (28) throughout the cooler (10). The annular walls of each of the insert housings define a hollow annular chamber within each insert housing body. The closed chambers are filled with a gel (29), water or other refrigerant to be frozen when the insert housing is placed in a conventional freezer or other cooling apparatus. The insert housings are identical, but are separately designated for clarity in defining the position of the insert housings within the cooler. One end of a tubular wall (30) includes a recessed, tubular end portion (32). The recessed end portion includes external threads (34) adapted to mate with corresponding internal threads on a sleeve wall portion (38) of a cap member (18) or an extended sleeve portion (42) in the other end of the tubular wall. Column 4 lines 11 to 16 teach it is to be understood that the cooler body need not be cylindrical

and other means for securing end caps in place, such as a tongue and groove arrangement, are also possible.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the modular sections of Bossa into the structure of Bruce and incorporate a tongue and groove mechanism to connect them as taught by Bossa because of the ability to vary the size of the cooled compartment depending on the amount or size of the material being transported or stored and adapt the cooled space to efficiently cool the materials as taught by Bossa.

9. Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruce as applied to claims 1 or 5 above, and further in view of Drake (US 3,858,410) or Malach (US 6,482,332). Bruce does not teach an ethanol water mixture or butanediol mixture as the solidifiable substance.

In the patent Drake teaches a combination dental material mixing slab holder and cooler which includes a base plate having a pair of spaced, upwardly projecting ribs for receiving a mixing slab and a central well, a sealed container in said central well and a reusable heat sink means within said sealed container. Column 2, lines 8-20 teach that the eat sink means is a stable liquid or solid material, having a relatively high latent or sensible heat capacity. Preferably the material has a latent heat capacity and undergoes a phase change at a temperature below ambient, such as water, water-ethanol solutions containing up to about 50 percent by volume ethanol, various brines and the like. Exemplary of the brines that can be utilized is an aqueous solution containing about 25 weight percent sodium chloride, an aqueous solution containing about 25 weight percent calcium chloride and the like.

In the patent Malach teaches various phase change formulations usable in thermal packaging systems using a single phase change material (PCM) part in liquid and part in solid form to confine the temperature of the product within a predetermined range. The temperature ranges are determined by the selection of PCM formulation. The phase change materials selected have high latent heats of fusion and maintain relatively constant temperatures as they change phase. This permits light weight packaging with the maintenance of temperatures in narrow, preselected ranges over extended periods of time. A phase change formulation that can be adjusted to freeze at temperatures from +40 °C. to below –30 °C. is disclosed, comprising

butanediol, selected percentages of distilled water, and nucleating agents. The phase change occurs over a narrow temperature range making this an ideal temperature control media. Nucleating or other agents are included to narrow the temperature range over which the phase change occurs. Column 3, line 60 to column 4, line 4 teach various goods such as biological products, blood products, vaccines, pharmaceuticals, chocolate products, latex paints with specific examples including whole blood 1 to 10 °C., Factor VIII (used by hemophiliacs) 2 to 8 °C., diagnostic blood samples 1 to 10 °C., some vaccines 2 to 10 °C., blood platelets 20 to 24 °C., and chocolate approximately 10 °C for storage by the system under controlled product temperatures. Columns 8-12 give several examples of compositions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ethanol water and butanediol water compositions of Drake or Malach into the device of Bruce because of their use for similar systems and products as taught by Drake and Malach.

10. Claims 11, 14 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruce or Bruce in view of Bossa as applied to claims 1-3 and 12 above, and further in view of Sheehan (US 4,322,954), MacDonald US 5,058,397) or Schea, III (US 5,181,394). Bruce does not teach a latch, eyelet, hinge, carrying strap or thermometer.

In the patent Sheehan teaches a portable cooler for medicine that contains a material to maintain the temperature of the contents at a desired level. The device includes a carrying strap (14) and latches (20).

In the patent MacDonald teaches a cryogenic storage container for biological specimens that includes a cooling gel or medium to keep the specimens at a temperature below ambient. The device includes a hinges (22,33) and latches (25,37).

In the patent Schea, II teaches a freeze protective shipping container for containers of liquid compositions, such as solutions of biologically active proteins, which are susceptible to physicochemical change upon freezing. Preferred container holders have double sidewalls and a freeze indicator adjacent a container-accommodating cavity. A phase change material such as a carboxymethylcellulose gel is disposed in the enclosed space between sidewalls and freezes at a temperature higher than the nucleation temperature of the composition. A freeze indicator

provides an irreversible visual signal upon reaching a temperature intermediate the nucleation temperature of the liquid composition and the freezing temperature of the phase change material. Column 4 lines 52-64 teach that the freeze indicator may have a variety of conformations and its only operational constraint is that it provide an irreversible visual signal indicative that a particular low temperature has been reached in the space where the vials are disposed. Thus, thermocouple devices of varying kinds and simple devices such as described in U.S. Pat. No. 4,191,125 are quite suitable as the freeze indicators.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a structure such as the latch of Sheehan or MacDonald or another known closure structure into the Bruce device because of it known ability to provide a secure closure which Bruce teaches might be desirable in some circumstances. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the hinge of MacDonald, the carrying strap of Sheehan or the temperature indicator of Schea, III into the Bruce device because of the ability to transport the device as taught by Sheehan, the benefits of a hinge as taught by MacDonald or the ability to monitor the temperature and determine if it has gone beyond the desired temperature range as taught by Schea, III.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited art relates to containers having cooling agents therein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arlen Soderquist whose current telephone number is (571) 272-1265 as a result of the examiner moving to the new USPTO location. The examiner's schedule is variable between the hours of about 5:30 AM to about 5:00 PM on Monday through Thursday and alternate Fridays.

A general phone number for the organization to which this application is assigned is (571) 272-1700. The fax phone number to file official papers for this application or proceeding is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Arlen Soderquist June 22, 2004

ARLEN SODERQUIST
PRIMARY EXAMINER